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PROSPECTS FOR POPULATION CONTROL

by

DONALD J. BOGUE

DISCUSSION

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KAROL J. KRÓTKI

Reprinted from Journal of Farm Economics
49(5): 1094-1105, Urbana, Ill., December 1967

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Prospects for Population Control

BY
DONALD J. BOGUE

AGRICULTURAL agencies know that the world faces a critical shortage of food within the next three decades if current rapid trends in population growth and current rather slow trends in the rate of adoption of modern family planning continue in the developing nations. Moreover, if the present rate of increase in world population continues to the year 2000 and beyond, the probability of a world food surplus is to shrink rapidly because sharply increased. If the world's population grows too fast, food exports to sustain the massive numbers of people the earth might support, provided we exhaust the resources of land and our presently unexploited mountain, desert, and coastal areas, will fall to a minimum which places severe strains on all the world's food supplies. It does not bode the way to a solution for many now because whatever the earth's population is allowed to be, the present growth trend would leave the earth's land so that it can support a world of two billion people. At a later time, well we would need to eat a larger "share of pie" because more, and more, and more, cultivated from any base, there is always a diminishing returns factor in. For more than a century, the official demographic work has been one of deep pessimism, but although growth does slow to a halt for many reasons (as the author notes in compactly below, like Arnold Toynbee's Franklin, he becomes extinct from quantitative representations).

Appalled economists have tended to accept this view at least implicitly. However, the great hope with which they have set about trying to reduce the agricultural economies of the developing nations has not been that the earth they hoped to use as just a food basket and human and other somehow humanity would be unaffected from Malthusian laws in the lack of them by some kind of Providence. Not just John Foster Dulles cantered the Asian dams project in the name of possible overpopulation but the whole of the world's population, and the author to the underdevelopment of the world's population.

Reprinted from *JOURNAL OF FARM ECONOMICS*

Vol. 49, No. 5, December, 1967

Editor: J. R. G. Green, Department of Economics, University of Chicago

Prospects for Population Control

DONALD J. BOGUE

AGRICULTURAL economists know that the world faces a critical shortage of food within the next three decades if recent rapid trends in population growth and recent rather slow trends in the rate of adoption of modern agricultural technology continue in the developing nations. Moreover, if the current population trends continue to the year 2000 and beyond, the population forecasts for the earth quickly become absurdly astronomical. A favorite parlor game of some food experts is to estimate the maximum number of people the earth could support, provided we exploit the resources of the sea and the presently uncultivated mountains, deserts, and other wastelands to the fullest extent which science fiction writers could imagine. Calculations of this sort do not lead the way to a solution. No matter how large any estimate of the earth's population is deemed to be, present growth trends would bring the earth's total to that size within a matter of a few generations. No matter how well we reconcile ourselves to eating algae, "hearts of oak" breakfast cereal, and beefsteak synthesized from soybeans, there is always a doomsday-year-plus-one facing us. For more than a century, the official demographic view has been one of deep pessimism: that mankind could look forward to only a few more seconds (as the earth's history is computed) before, like Raymond Pearl's fruitflies, he becomes extinct from senseless reproduction.

Agricultural economists have tended to accept this view, at least superficially. However, the great heart with which they have set about trying to update the agricultural economies of the developing nations leads one to believe that secretly they hoped it was all just a bad statistical dream and that somehow humanity would be snatched from Malthus' jaws in the nick of time by some kind Providence. Not since John Foster Dulles cancelled the Aswan Dam project in the name of inevitable overpopulation has any major action of developed nations with respect to the underdeveloped nations been based on the presumption that population

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growth would indeed follow the dreaded exponential upward spiral. Most of us have given mankind credit for being too adaptable to his environment and too intelligent to let things get that desperate. Therefore, I do not think that *privately* agricultural economists have been too pessimistic about the population-versus-food problem. Instead, they have merely lacked data to support the confidence they have had in human ingenuity.

Evidence is now rapidly accumulating that demographers have been far too pessimistic about the prospects for rapid declines in the birth rates of the developing nations. At the present moment there is a substantial difference of opinion between the demographers and the family planning researchers on this question. As a member of this latter group, I am one of the more optimistic observers.

The thesis of this paper is that *the world is currently being swept by one of the greatest mass movements in all history—a unanimous movement to take emergency action to reduce human fertility quickly to within the limits needed for orderly human progress toward generally accepted social and economic goals.* This is one of the Commandments of the emerging world morality. It is accepted without question by communists and capitalists, by Christians, Muslims, Hindus, Buddhists, and spirit-worshippers; it is one of the few things Russians and Red Chinese can still agree upon; it is now a part of the popular folk culture of the world. Couples all over the world are behaving more and more in conformity with this new set of demographic morals.

A corollary of this assertion is the opinion that in India, Pakistan, Mainland China, Latin America, and other "trouble spots" of population growth, birth rates have already started to decline, and that by the year 2000 world population growth will have slowed to zero or to a rate so nearly zero that it could easily be brought to zero if those alive at that time think it best to do so.

Evidence in Support of the Optimistic Position

A rather detailed documentation has been presented elsewhere to support the optimistic position taken above.¹ It is therefore not necessary here to do more than to summarize the major points in the argument.

1. In almost every nation where a serious population problem exists, the political, economic, medical, and educational leaders have become acutely aware of it and are either actively promoting a nationwide program of fertility control or agitating that such a program be established forthwith. The consequences and costs of permitting trends to continue are fully appreciated, and huge plans and programs are either under way or being planned. Mainland China, India, Pakistan, Ceylon, Egypt, and

¹ Donald J. Bogue, "The End of the Population Explosion," *The Public Interest* Vol. 7, Spring 1967.

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Malaya are examples. Only Indonesia and the Philippines are holdouts, and they show strong signs of changing.

2. There is a massive grass-roots movement in support of fertility control all over the world. Like the T. V. advertisements, "Survey after survey shows that more people want family planning than to have more children." Couples universally desire children until they have two living children, but thereafter less than one-half wish to have a third, and less than one-third wish to have a fourth. Results of this magnitude are routinely reported for illiterate rural populations in Asia and Latin America, and for American slums. Nowhere, with the possible exception of small and special cultures in Africa (which have not been surveyed as yet) is there any evidence of a genuinely "high fertility culture." Instead, one gets the picture of a population that is being forced by lack of information and inadequate service to bear millions of children it does not want.

3. Rapid strides are being made to make birth control pleasant, easy, cheap, and simple to administer to large masses. The birth control pill and the intrauterine device have put the world's population problem in a different ball park from the one where the game was being played before 1960. Yet these methods are scheduled to be replaced by newer and even more acceptable methods within a very few years. Some of the world's greatest physiologists and greatest laboratories are earnestly at work on the problem of perfecting better methods. The days when the natural course of human amour had to be interrupted to make use of the contraceptive device of the couple's choice is over. In a few years, couples may need to take a pill to reverse the effects of a longterm contraceptive in order to become pregnant. Fertilitywise, the next generation may be expected to be much more "turned off" than the present one.

4. Social scientists better understand how to motivate, teach, and persuade persons of low education living in rural areas and with only limited contact with the modern world to adopt these newer methods of family planning. Like the physiologists, they are engaged in intensive research and experimentation, and each year make important discoveries and progress.

5. Massive investments of unprecedented magnitude are being made in family planning, and even larger ones are anticipated. International aid for family planning has reached gigantic proportions. The Ford Foundation is spending millions of dollars annually on it. The USAID is scheduled to spend at a rate far in excess of this. The Swedish government is giving free to Pakistan large quantities of contraceptives. India and Pakistan have larger family planning budgets than they can spend. Never, in all of the world's history, has such unlimited financing been given to a social action program.

6. A variety of special sociological forces, previously not appreciated, are working for rapid adoption of family planning.

(a) As people's incomes dip because of population pressure, the poorest and most miserable are among the first to adopt family planning and practice it steadily.

(b) People are much more inclined to talk about contraception and to pass information about it from person to person than was previously thought possible. Thus, programs of education have a big "multiplier effect."

(c) Males are highly responsive to family planning motivation, whereas they had been stereotyped as recalcitrant.

(d) Rural people are more quick to grasp the national, community, and family implications of overpopulation than had been thought possible.

(e) Rural people show much less shame and modesty in accepting public family planning service than had been anticipated.

Conclusion

Almost all of the developments described above did not exist in 1959 or were only in a crude development stage. In 1967, just seven years later, the situation is radically different. From the study of the adoption of new ideas it is known that the curve of adoption is exponential, so that we may regard these first seven years as the "flat" part of the curve and can look forward to an even faster upswing in adoption in the next decades. It is 33 years until the year 2000. If we extrapolate the adoption-of-family-planning trend by even a reasonably moderate exponential curve, we arrive at very high rates of contraceptive practice by the year 2000.

Thus, we have a "horse race" between two sets of exponential curves—the old-fashioned Malthusian curve of exponential population growth and the new-fashioned curve of exponential adoption of a new practice. On which of these horses should the agricultural economists place their bets? Fortunately, it is not necessary for them to take sides on this issue. The propositions involved are all highly verifiable and will be given rigorous empirical testing by the course of historical events in the next two decades. Meanwhile, there is so much malnutrition and improper balance of foodstuff production that they need only to continue to work at peak capacity to increase and diversify food production, as they "wait and see."

Discussion: Prospects for Population Control

KAROL J. KROTKI

The main message of Professor Bogue's paper is simple and is stated in clear and forceful terms. According to him, there is every indication that mankind is taking effective steps to reduce fertility. These steps, by the year 2000, will bring fertility down to manageable proportions. He does not stop to say that even this optimistic prognostication will mean a world population of six billion or more, with resulting changes in the quality of life probably more far reaching than anything we are able currently to imagine.¹

Apart from this main message, there are two or three partly explicit, partly implied statements which are inherently at least as interesting as the main message and yet more realistic and operationally more significant.

Professor Bogue's confidence that humanity is "over the hump" with its fertility problem is based on several arguments:

1. There is increasingly general support of the political, economic, medical and educational leadership in all countries of the world.
2. Preferred family size is already very small and getting smaller.
3. Birth control methods are becoming more effective, cheaper, pleasanter to use.
4. Social scientists are becoming more effective in manipulating human populations.
5. Massive financial investments, both national and international, are taking place in the field of family planning.
6. A number of related changes are taking place in the social fabric or are being discovered as having been always there and, in either case, are favorable to acceptance and effective use of family planning methods.

Let us see how far these points are both true and relevant.²

1. It is true that in a number of important countries political and other leadership make repeatedly unequivocal statements in support of family planning. Some of such leaders formulate relevant policies. Some of those again endeavor to ensure that these policies begin to be carried out, at least to a certain extent. Such support appears to be, in the present-day

¹ Canada, with her vast open spaces, lends an air of unreality, but also hopefully detachment, to the discussion of "population explosion," which few other countries could equal. (Sudan and Sabah are also possibly in this rare category.) However, the Canadian unawareness of the population problem is not complete, as the recent Centennial Lecture at the Agricultural Institute of Canada indicates [2].

² The literature in this field is extensive and the interest is great. The references

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circumstances of underdeveloped countries, an important condition, or at least ingredient, for the launching of a nation-wide family planning campaign. It is, however, not an irrelevant qualification of this admission of relevancy of the argument to point out that fertility declines in the Western world took place in the face of public opinion, against the advice of the leaders, the Church, the Queen. Himes, the historian of contraception, traces the strong causal connection between the notorious Bradlaugh-Besant trial and the decline in British fertility from 35 births per thousand population to 15 [16, p. 251; 24]. This is not to say that public policy is unnecessary and is bound to be ineffective. In the absence of self-generated will to plan families it *may* be a substitute. However, the mere existence of public measures, and even less the pronouncements of leaders, are not a proof of decline, real or incipient.

2. The suggestion that the preference for two-child families has become general was news to at least one listener.³ It is a disadvantage of much of Professor Bogue's paper that his general statements are not documented. In the absence of chapter and verse, one can only suggest that there are still large populations where the very concept of preferred family size, as a matter of choice, is foreign. There is also the methodological difficulty of preferred family size being highly correlated with actual family size, and the uncertainty as to which way the causal link works [3]. Measuring quantities in this delicate area, not to mention attitudes, feelings, knowledge, and plans, presents difficulties. Much progress is being made. (Recently a Korean-Canadian team added an important contribution in this field [19].) It is, however, premature to speak with certainty. The measurements are too uncertain and there are not enough of them. Nevertheless, family planning workers should not direct their attention to questions of research. As action people they may be doing some good, in spite of the scepticism of this discussion, although for unbiased research they may lack the equipment. They should merely refrain from making extravagant claims.

However, even if it were true that the preferred family size of most populations of the world is already small, one could legitimately ask about the operational significance and effectiveness of such a preference.

in a short discussion are few for reasons of space and are used more to avoid plagiarism than to document one's case. The most generous source for data and latest developments in the field of family planning are *Studies in Family Planning*, issued as occasional papers by the Population Council of New York. By August 1967, 22 numbers with several supplements had appeared.

³ For a view summarizing findings sympathetic to Bogue's optimism, see Mauldin [20]. For an opposite interpretation of similar figures, see Davis [7 and 8]. Even in the celebrated case of Taiwan, taken recently off the list of underdeveloped countries by the US AID, only 9.8 percent of women wanted fewer than three children [7]. On a close look at the evidence available it seems almost easier to show that recent trends in fertility were upwards rather than downwards [7 and 8].

It is as if the social surveyor in an underdeveloped country asked his respondents: "Would you like a higher standard of living?" Whatever the preferences, if the means, in terms of human perseverance, of implementing them are not there, then the preferences are largely irrelevant. It is even possible to agree that traditionalism and religion are no longer the obstacles, as claimed by Professor Bogue in his longer paper [4], without agreeing that the effective will is there.

3. The criticism of the third point is somewhat parallel to the criticism of the first point. Much pleasanter and much more effective birth control methods are becoming available. We can expect a gigantic breakthrough that will make all of us sterile, when the act of fertilization will require a positive step. Until then, it is legitimate to point out that most known declines in human fertility have taken place in the absence of particularly pleasant, particularly effective means of contraception.

4. This discussant would like to know of the particularly successful means of manipulating populations in favour of family planning. He is all for continuing research in this area in the hope that no police state will ever be able to take over the results; but the most effective social, political, manipulative methods he is aware of are those with results opposite to the intended ones. The popular theme of linking the lofty issue of national income per capita and the individual happenings in the intimacy of the bedroom where two hearts beat toward each other must almost certainly be a failure of communications. The link is too remote to be effective, even were we not all aware of national success stories from the past being frequently associated with population growth. Such is the perversity of human nature that one could almost advocate controversy and pro-natalist pronouncements in order to motivate the population in favor of family planning. Still, this writer must admit that he is aware of at least one instance where family planning acceptances were proportionate to the motivational efforts, counted in terms of number of family planning workers employed in the field [12].

5. A student of Japanese population policy traces the first success of it to the first disagreement with it of the foreign occupying power in the years after World War II [26]. One does not need to quote the more extreme suspicions generated by family planning campaigns among the Negroes of the USA in order to indicate that the massive foreign-directed campaigns in underdeveloped countries run similar risks.

Incidentally, the figures of budgetary allocations quoted by Professor Bogue, both for the Ford Foundation and for the AID, are almost certainly too high by a very considerable margin.⁴ In any case, emphasizing

⁴ As against the \$400 million dollars annually spent on international aid for family planning given in Professor Bogue's paper, the Ford Foundation reports \$15 million for population [9, p. 66] and \$2 million for family planning in India [9, p. 67] in old

finance repeats the misunderstanding in old family planning policies that suggested that lack of finance in underdeveloped countries was somehow a limitation to the successful interweaving of population policies with national economic development plans. It was the organizational capacity, the will and the know-how, that were the limiting factors, and not the relatively picayune sums of money. These could always be squeezed out of another, less sensitive part of the national budget and the "borrowed" sums made good, if necessary, by foreign aid. Once more we have in Professor Bogue's argumentation a possibly correct but rather irrelevant assessment of an aspect of the allegedly favorable situation, favorable to family planning. Most of the favorable considerations listed by Professor Bogue so far are of a mechanistic nature which, even if true, are probably irrelevant.

6. In his sixth and last point, he groups together aspects of the social fabric that are most relevant to the issue, although he does not go much beyond listing them. For each of the arguments, an opposite one could be quoted. Urbanization in underdeveloped countries, and such modernization as takes place, are seldom, if ever, paralleled by the customary fertility declines expected by social scientists. Prevailing economic policies concerning, say, taxation and housing are usually pro-natalist. Disruption of village life, migration to towns, and introduction of UNICEF-provided infant foods shortens the period of lactation and probably contributes to higher fertility. The evidence that perseverance, foresight, planning are being adopted to any important extent, whether in the field of family planning or in other fields of endeavor, by societies where they are particularly missing and necessary is still lacking.

The remaining minutes may well be spent on reviewing some of the unstated and implied parts of Professor Bogue's message which, at least to this writer, are more interesting and important than the main message.⁵ Professor Bogue's case can be summarized thus: everything is fine. The

balances and other smaller figures for overseas development [9, pp. 97-114]. The total of income of the Ford Foundation in 1966 having been \$157 million and all its grants and projects in the exceptional year of 1966 having been \$354 million, the figure of \$400 million must be wrong. AID is also unlikely to spend "far in excess" of \$400 million if all the foreign aid expenditure is around \$3 billion.

⁵ This discussion is not concerned with the central issue before this session: food *versus* population. It is limited to an assessment of Professor Bogue's demographic argument. On the wider issue, a great variety of exercises is possible. A respected, if somewhat flamboyant, writer [6] discussed seriously the possibility that the world's agriculture, if properly treated, could feed on American-style diets 47 billion people (or 157 on Japanese dietary standards). Even at recent high rates of growth, it would take over two centuries to reach the 47 billion. In comparison with such writers, our concern about the quality of life [15 and 21] with "only" 6 billion population may appear to be insignificant. Other writers, even ignoring the "amenity" aspects, see world famine around the corner, the only question for them being how the developed world should deal with the starving nations when starvation comes in 1975 and 1985 [22].

large and organizationally impressive programs of family planning are just beginning or just about to begin to pay off. All that is needed is continuing "crash programs."⁶ Declines in birth rates are already surpassing declines in death rates. The place of the "population explosion" is being taken over by the "contraception adoption explosion."⁷

This case is an easy target for adverse criticism. The fact that it represents a very small minority in the demographic fraternity need not be immediately convincing. Demographers have been known to be particularly unimaginative and earth-bound in their prognostications in the past. Actually the case obtains some measure of support from a presidential address delivered to the Population Association of America in 1965 [10]. However, the address was so widely misunderstood that before publication it had to be provided with a separate explanation [10, fn. 23]. The new paragraph admitted that no large fertility declines can be predicted in the absence of other (non-family planning) conditions.

The weakness of Professor Bogue's case lies in the fact that he does not approach the problem with the detachment of a researcher. He writes with an operational purpose. He admits in the present paper that he is currently wearing the hat of a family planning researcher and not that of a demographer. The family planner has a preconceived purpose. Professor Bogue's interests are worldwide. He is a leader of a wide variety of action programs all over the world. He must be circling the globe twice a year on inspection and advisory trips to his many action teams.⁸ He has a tremendous role to play through this work, much of which will change the face of the world.

But like the general who wants to win a battle, the war is too serious a matter to be left to him. The idiom is not too farfetched. In his earlier paper [4, p. 20] he admits that he wrote for soldiers going into battle and he obviously could not tell them "that they are almost certain to be defeated." We will be excused in the detached air of this scientific conference if we do not take quite seriously this cry from the propaganda department of Bogue's war machinery.⁹

There is, however, a serious damage, which this case is inflicting on a

⁶ "Crash programs" in the long and varied experience of this discussant are as a rule admissions of defeat when planning went wrong. They are expensive in terms of the damage they do to other programs. "Crash" means mobilising resources not best suited and crashing the chances of other programs deprived through the crash [17].

⁷ Humanity may well adjust itself to the risk of suffocating numbers for good ecological reasons, as has been suggested by more than one writer, for example, by Grauman [13]. But then it may not. The point at issue is whether the indications assembled by Professor Bogue can be taken as symptoms of such an adjustment.

⁸ My clipping service brings home reports on his work and activities from many a country, where he influences public opinion and its leaders.

⁹ One could actually ask oneself whether the psychology employed is the most effective one: to tell the soldiers going into battle that the war has been won. Would they not desert to fight battles still to be won?

potential solution to the problem of population growth. The various ways in which this damage takes place can be grouped under two headings. On the one hand, it draws attention away from the specifics of the difficulties in which family planning operates.¹⁰ A gremlin in Thailand hypothesized that Siamese women, being smaller than Western females, will require smaller intrauterine contraceptive devices. Small moulds were produced, millions of small IUD's were produced. For two years researchers were puzzled as to why the failure rate there was greater than elsewhere. Lulled by Professor Bogue, we no longer see the importance of such difficulties. In the discussion of abortion, it somehow seems no longer necessary to separate the moral issue from its main health drawback of illegality. The discussion of other shibboleths of family planning loses importance: the "one gadget" panacea [17], the middle-class bias [25], the high parity bias [18], the medical-clinical bias [14]—all lose importance if it is true that populations can be so effectively and easily manipulated. However, these are only points of tactics.

The second heading involves deeper, underlying strategy. This discussant shares the belief that "reproductive behavior cannot be changed by verbal persuasion" [7]. We are entering a new area. The link between copulation and reproduction has been broken chemically (the pill) and mechanically (the coil), in a manner which is cheaper, pleasanter, more convenient, and more effective than earlier devices. In societies so motivated (and Professor Bogue notwithstanding, underdeveloped countries do not appear yet to be in this category), there is thus a basis for a complete reorientation of attitudes towards human reproduction.

The recent relaxation and liberalization of laws concerning divorce, contraception, and abortion in a number of countries is consistent with the historical need as perceived by demographers. There is even a subtle but pronounced change in the attitude of the Roman Catholic Church (and let it be remembered that the present attitude of the Protestant churches is of very recent origin) from outright prohibition to the admission that procreation must be governed by feelings of parental responsibility and that marital love requires and deserves periodic nourishment in the form of sexual affection. History has marched to a new point. Professor Bogue may be, after all, right. In this age we all, including information and ideas, travel much faster than ever before. Who knows, underdeveloped countries may "catch on" in spite of the lack of current indications. However, Professor Bogue makes it unnecessarily difficult for his soldiers by stating with his high authority and wide influence that the battle is won. Societies, and only those concerned come into question, lull

¹⁰ A serious daily, reporting extensively on the Guelph conference, summarized Professor Bogue's paper in considerable detail. Naturally none of the problems were stated, because they were missing from the paper, though to the credit of the editors the optimism of the paper was question-marked [23].

themselves in the meantime into a feeling of security with the palliative of family planning. And small wonder. A distant threat, especially if universally shared, provides no individual motivation.

The present societal structures guarantee the right to unlimited reproduction [7]. Instead, humanity will have to develop and follow a new principle: exceeding replacement of two persons by two persons will become "a crime, a failing in regard to mankind as a whole, having the nature of an aggression which if universally practiced (like the burning of coal-fires in fog-bound London), brings universal loss" [1, p. 436].

Parenthood of two children is replacement. Parenthood of three amounts to rapid increase, which will eventually have to be curtailed by destruction. The value of Professor Bogue's paper lies in pretending that humanity is already equal to facing up soberly to its future. Who knows, maybe by the year 2000 humanity will be equal to this early pretence formulated by Professor Bogue.¹¹

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¹¹ Since the Guelph conference, the debate continues. Hardly a conference takes place without getting involved in a related discussion. The University of Michigan will celebrate its 150th anniversary, among others, by commissioning a lecture on the topic of this session [5]. During session 90 at the 62nd Annual Meeting of the American Sociological Association in San Francisco, two intellectual giants locked in battle on the issue of whether humanity is adjusting to the new circumstances, or more specifically, whether family planning programs are [11] an adequate substitute for more generally conceived population policies [8], which would disrupt societies in a more basic manner than the mere palliatives of family planning. In interest, the exchanges would be reminiscent of another debate of giants (Mortara and Sauvy) at the World Population Conference in Rome in 1954, were it not for the fact that the Rome debate, concerned with a point of demographic theory, was in comparison with the present debate like cultivating roses while forests burn.

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